RUMWEL

7				
	Power station plant		Mean power density	51.6kW/dm
	Thermal reactor power	3690MW	Heat transmission area in the core	7963m ²
	Gross electric power	1316MW	Discharge burn-up primary core	17 960MWd/t
	Net electric power	1260MW	Discharge burn-up balanced core approx.	
	Net efficiency	34.1%	Number of control rods	205
	1 vot officionoy	04.170		A STATE OF THE PARTY OF THE PAR
	Nuclear plant		Absorber material	boron carbide (B ₄ C)
	CONTAINMENT		Shut-down time (normal)	112s
	Company and the company of the compa	O Ebox	Shut-down time (emergency shut-down)	3.7s
	Design pressure abs.	3.5bar		
	Design temperature	145°C	Turbo set	
	Internal diameter	29.6m	TURBINE	
	Wall thickness	25-70mm	Live-steam flow	7186t/h
	Volume of water in the		Live-steam pressure	67bar
	condensation chamber	3770m ³	Live-steam temperature	283°C
			Speed	1500rev/mi
	REACTOR VESSEL		Number of casings and flows	
	Operating pressure	70.6bar	HP section	1/2
	Operating temperature	286.4°C	LP section	3/6
	Steam flow	7186t/h	Blade length	1.36m
	Feedwater temperature	215°C	Number of condensers	3
	Internal diameter	6.78m	Cooling surface	3 x 20 000 000 m ²
	Overall height including cover	22.38m	Mean cooling water intake temperature	11°C
	Thickness, cylinder cladding	17.1 cm	Cooling water warm-up range	10K
	Thickness, floor	24.2cm	Pressure in the condenser	0.044bar
	Overall weight	approx. 750t	Cooling water flow condensers	205 000 m ³ /h
	O VOI dii VVOIGITE	αρριολ. 7001	Overall cooling water requirements	225 000 m ³ /h
	REACTOR CORE		Overall cooling water requirements	223 000111711
	Core diameter	4.99m	GENERATOR	
	Core height	3.81m		15201/A\/A
			Apparent output	1530MVA
	Flow of coolant through the core	55 598t/h	Effective output	1316MW
	Overall uranium weight in the core	150t	Power factor	0.86
	Number of fuel elements	840	Frequency	50Hz
	Type of fuel element (incl. water box)	9x9	Terminal voltage	27kV
	Mean specific uranium load	25.3kW/kg U	Cooling system (stators and rotors)	water

Key to power station cutaway

- 4 Gantry crane5 Feedwater tank
- 6 Construction opening
- 8 Generator 9 Low pressure turbines (6 flow LP-turbine)
- 11 Coolers (process coolers)
- 12 Off-gas system
 13 Circulating water inlet
 14 Circulating water outlet
 15 Turbine bypass
 16 Condensers
- 17 Exhaust air stack
- 18 Reactor building
 19 Closed cooling water tanks
 20 Exhaust air fan system
 (reactor building)
 21 Make up water tank
 22 Exhaust air fan system
- (turbine building)

- 25 Charcoal adsorber
- 3 Main turbine building crane
 24 Purging air compresso 26 Evaporator feed tanks 27 Distillate vessel
 - 28 Treated water vessel 30 Diesel generator building
- 10 Condenser purification filters 32 Construction opening 33 Venting stack 34 Exhaust air instrument room 55 Insulation
 - 35 Containment venting vessel 56 Reactor shield 36 Reactor building overhead crane 37 Reactor service floor
 - 38 Fuel handling machine 39 Channel stripping machin
 - 40 Fuel pool 41 Set down and flood pool
 - 43 Inlet air fan 44 Fuel loading closure head

- 48 Lower annulus 49 Reactor vessel
- **50** Feedwater pipes 51 Condensing pipes 29 Liquid waste collecting tank 52 Suppression pool spraying
 - 54 Suppression pool cooling
 - 57 Exhaust steam from
 - 59 Control rod drive room
 - 61 Control rod drive
 - **62** Containment 63 Charcoal filters

- pumping system
 66 Main air lock

- **60** Forced circulation

- 68 Containment sump suction
- 71 Shutdown intercoolers
 - 72 Residual heat removal
 - 74 Containment return system

 - 77 Hot workshop 78 Hot workshop overhead 79 Waste storage

- 67 Containment sump
- **69** Emergency air lock
- 73 Reactor building gate
- 75 Shutdown intercooler system
- 76 Residual heat removal pump
- 80 Control room
- This wallchart was produced by the magazine
 Nuclear Engineering International in collaboration with
 Hamburgische Electricitäts-Werke and Siemens. It was
 Dublished in the November 1993 issue This wallchart was produced by the magazine

© Reed Business Publishing 1993, Quadrant House, The Quadrant, Sutton, Surrey, SM2 5AS, UK

